

ABSTRACT OF THE DISCLOSURE

5 A magnetic device has a layer containing fine pores and having wirings on both faces of the layer formed on a substrate, wherein at least a part of the pores are filled with a layered column formed by stacking magnetic layers and nonmagnetic layers alternately, and at least a part of the pores filled with a conductive column as writing wires for writing into the magnetic layers in the adjacent pores. The fine pores may be nano-holes of alumina formed by anodic oxidation. A part of the pores may serve to intercept a magnetic field. The magnetic layer may contain Co, and the nonmagnetic layer and/or the writing wire may contain Cu. The pores may be arranged in a honeycomb arrangement or a rectangular array. The ratio of the sectional area  $S$  ( $\text{cm}^2$ ) of the pore and the length (cm) of the pore satisfy the relation:  $10^5 < L/S < 10^8$ .

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